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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,823

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EXAMINER

TRUONG, TAMTHOM NGO

ART UNIT

PAPER NUMBER

1624

MAIL DATE

DELIVERY MODE

01/20/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,823	Applicant(s) ARRINGTON ET AL.	
	Examiner TAMTHOM N. TRUONG	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10-12-09 (Election).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11, 21-24, 29 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) 21-24, 29 and 31-34 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5 and 7 is/are allowed.
- 6) ☒ Claim(s) 1, 6, 8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

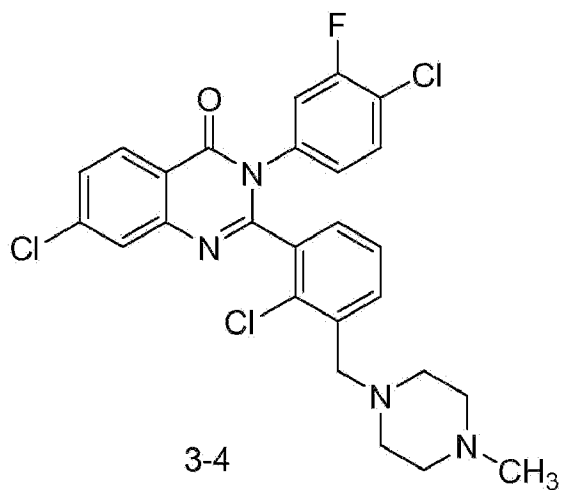
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/5/07+ 2/12/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants' election of Group V in the reply filed on 10-12-09 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Also, applicants have elected compound 3-4, depicted on page 53 of the specification.



However when an electronic search was conducted for the elected quinazolinone core, an answer set was retrieved containing more than 10,463 hit structures with 102 references after eliminating many references with a publication date later 2003, and searching within "therapeutic" field, which means many potential references could have been missed. The choices for R¹ and R² do not impart novelty as much which explains a large volume of references, and

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impose a serious burden of searching and examining. Thus, Group V has been modified as set forth below:

- Va. R^1 is hydrogen, C_1 - C_{10} alkyl, or aryl;
- Vb. R^1 is C_2 - C_{10} alkenyl, C_2 - C_{10} alkynyl, C_1 - C_6 perfluoroalkyl;
- Vc. R^1 is C_1 - C_6 aralkyl, C_3 - C_8 cycloalkyl;
- Vd. R^1 is heterocyclyl.

Based on applicants' elected species, Group Va has been constructively elected.

Applicants are advised that the claims will only be examined with respect to this subject matter beginning first with the elected species and further to determine patentability of remaining claims as they pertain to the elected subject matter set forth herein.

Claims 9, 12-20, 25-28 and 30 are cancelled.

Claims 1-8, 10, 11, 21-24, 29 and 31-34 are pending.

Claims 1-8, 10 and 11 (in part) are examined according to the elected subject matter.

Claims 21-24, 29 and 31-34 are held withdrawn as being drawn to the non-elected method claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by **Heider et. al.** (US 4,379,788). For example, the compound of Example B reads on the instant formula I with the following substituents:

- a. R^1 is alkyl;
- b. R^2 is hydroxyl; $p = 1$;
- c. R^3 is alkyl when choice #1 has $a = 0$ and $b = 0$;

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by **Aldag et. al.** (US 4,908,448). For example, Aldag's formula III (in column 6) reads on the instant formula I with the following substituents:

- a. R^1 is a phenyl group;
- b. R^3 does not exist because $n = 0$;
- c. R^2 is a dialkylamino group when choice #9 has $a = 0$, and $b = 0$; $p = 1$.

4. Claims 1, 6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by **Yale et. al.** (US 3,463,778). For example, the compound of Example 2 (in column 2) reads on the instant formula I with the following substituents:

- a. R^1 is a hydrogen atom;
- b. R^3 does not exist because $n = 0$;
- c. R^2 is a halogen; $p = 1$.

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5. Claims 1, 8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by **Wang et. al.** (Bioorg. & Med. Chem. Lett., (2002), Vol. 12, pp. 571-574). For example, compound #14 (in Table 1) reads on the instant formula I with the following substituents:

- a. R^1 is a alkyl group;
- b. R^3 does not exist because $n = 0$;
- c. R^2 is a dialkylamino group when choice #9 has $a = 0$, and $b = 0$; $p = 1$.

6. Claims 1, 6, 8, 10 and 11 rejected under 35 U.S.C. 102(b) as being anticipated by **Griffin et. al.** (J. Med. Chem., (1998), Vol. 41, No. 26, pp. 5247-5256). Several compounds in Table 1 (e.g., compounds # 10, 12, 22-25, 28-34 of formulae C or D) read on the instant formula I with the following substituents:

- a. R^1 is a hydrogen atom, or an alkyl group;
- b. R^3 is hydroxyl, alkyl (when choice #1 has $a = b = 0$) or alkoxy (when choice #1 has $a = 0$, $b = 1$);
- c. R^2 is NH_2 (choice #9 has $a = 0$, and $b = 0$); alkyl (choice #1 has $a = b = 0$); cyano, $-CO_2H$, $-CONH_2$, etc.

7. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by **Cruickshank et. al.** (J. Med. Chem., (1974), Vol. 17, No. 4, pp. 468-469). For example, compounds # 4 read on the instant formula I with the following substituents:

- a. R^1 is hydrogen atom;
- b. R^2 is a halogen;
- c. R^3 is choice #1 with $a = b = 1$;

Claim Objections

8. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior arts of record do not teach or fairly suggest the additional substituent corresponding to R^{2a}.

Allowable Subject Matter

9. Claims 3-5 and 7 are allowed because the compounds of formula III has a combination of substituents that are not taught or fairly suggested by the prior art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMTHOM N. TRUONG whose telephone number is (571)272-0676. The examiner can normally be reached on M, T and Th (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tamthom N. Truong/
Examiner, Art Unit 1624

/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624

1-15-10